REMARKS:

The claims pending in the subject patent application have been subjected to a restriction requirement under 35 U.S.C. §121. During a telephone conversation on March 15, 2005 between Examiner Caixia Lu and Alvin T. Rockhill, the Attorney for the Applicants, a provisional election was made to prosecute the invention of Group I, which is directed to claims 1-15. This provisional election is hereby affirmed and the non-elected claims have been canceled.

The specification was objected to because the paragraph at page 10, lines 8-24, made reference to "chloroform and carbon tetrachloride" as chlorinating agents with these compounds not falling under the definition of the "halogenated organic compound that does not contain labile halogen atoms." Accordingly, this paragraph in the specification has been amended to delete chloroform and carbon tetrachloride from the list of halogen containing compounds that can be used.

Claims 11, 13, and 15 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the applicants regard as being their invention. This rejection was made because claim 11 was dependent upon a non-existing claim (claim 62). Claim 11 has accordingly been amended so as to be made to be dependant upon claim 6. Claim 13 had an extraneous comma therein. Claim 13 has been amended to remove this extraneous comma. Finally, claim 15 made reference to "the catalyst system being void of labile halogen atoms" rather than to "the catalyst system being prepared in the absence of compounds that contain labile halogen atoms." Accordingly, claim 15 has been amended to specify that "the catalyst system is prepared in the absence of compounds that contain labile halogen atoms." These amendments accordingly overcome the basis of all of the rejection under 35 U.S.C. §112, second paragraph.

Claims 1-14 have been rejected under 35 U.S.C. §103(a) as being obvious over the teachings of Sone et al (United States Patent 6,130,299). However, claim 1 has been amended in a manner that further distinguishes it from the teachings of Sone. The Examiner has noted that Example 1 of Sone demonstrates the preparation of a Group III-B metal containing catalyst by reacting neodymium octanoate, triisobutyl aluminum, and diethylaluminum chloride, and then aging the catalyst mixture in 1,3-butadiene. The Examiner has further noted that Sone makes no limitation with respect to the order of

addition of these components. However, the specific order of addition of the catalyst components is the key to the invention now being claimed.

Preparing the catalyst system of the present invention as called for in claim 1 results in a very stable alkylated Group III-B metal containing catalyst component that can be stored for periods of at least one year before being used. Thus such catalyst components can be stored, shipped and used as needed (see Example 8 at page 22, lines 27-31 of the specification). This is in contrast to the catalyst systems of Sone which are only reported to be stable for several days (see Sone at column 6, lines 49-50). Accordingly, the catalyst components made by the process now being claimed are greatly superior to the catalyst systems of Sone in that they are much more stable. This is a tremendous advantage in commercial operations where it is highly desirable to have the ability to store the catalyst component and use it as needed over longer periods of time.

Sone specifically states that there is no limitation as to the order of addition of the catalyst components (see column 5, lines 33-34). However, to attain the excellent catalyst stability that is realized by practicing the invention now being claimed it is critical to first react the organometalic compound that contains a metal from Group III-B with the organoaluminum compound to produce an aluminum modified Group III-B metal containing catalyst component and then to subsequently react the aluminum modified Group III-B metal containing catalyst component with the halogen containing compound to produce the Group III-B metal containing catalyst system.

Claim 1 has been amended to call for (1) the organometalic compound that contains a metal from Group III-B of the Periodic System to be reacted with the organoaluminum compound in the absence of conjugated diene monomers, (2) the aluminum containing catalyst component to be added directly to the polymerization reactor, and (3) the halogen containing compound to be added directly to the reactor. All of these new limitations in claim 1 are in contrast to the process disclosed by Sone. More specifically, Sone teaches that the catalyst components can be mixed in the presence of a conjugated diene and does not disclose or suggest that there would be any advantage associated with adding the aluminum containing catalyst component or the halogen containing compound directly to the reactor. Thus, the teachings of Sone do not provide any motivation for utilizing the order of catalyst component addition now called for in claim 1. More importantly, the teachings of Sone do not suggest or imply that catalyst stability could be improved by utilizing the claimed order of

catalyst component addition.

It should also be noted that the catalyst systems of Sone are for use in vapor phase polymerizations. This is in contrast to the process now being claimed wherein the polymerization is conducted in an organic solvent. In the vapor phase polymerizations of Sone, an inorganic filler is used both as a reinforcement agent and as the catalyst. In the vapor phase polymerizations of Sone, the catalyst system is delivered to the polymerization via the inorganic filler. In the process of Sone it is accordingly necessary for all of the catalyst components to be present in the inorganic filler composition. This is in sharp contrast to the solution polymerization called for in claim 1 wherein the aluminum containing catalyst component and the halogen containing compound are separately added directly to the reactor.

It is believed that this amendment puts the subject patent application fully in compliance with the requirements of 35 U.S.C. §103(a) and 35 U.S.C. §112, second paragraph. It is accordingly now believed that it is appropriate to allow the subject patent application and such an allowance is respectfully requested. However, in the event that this amendment does not place the subject patent application in a condition for allowance an interview with the Examiner is respectfully requested.

Respectfully submitted,

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